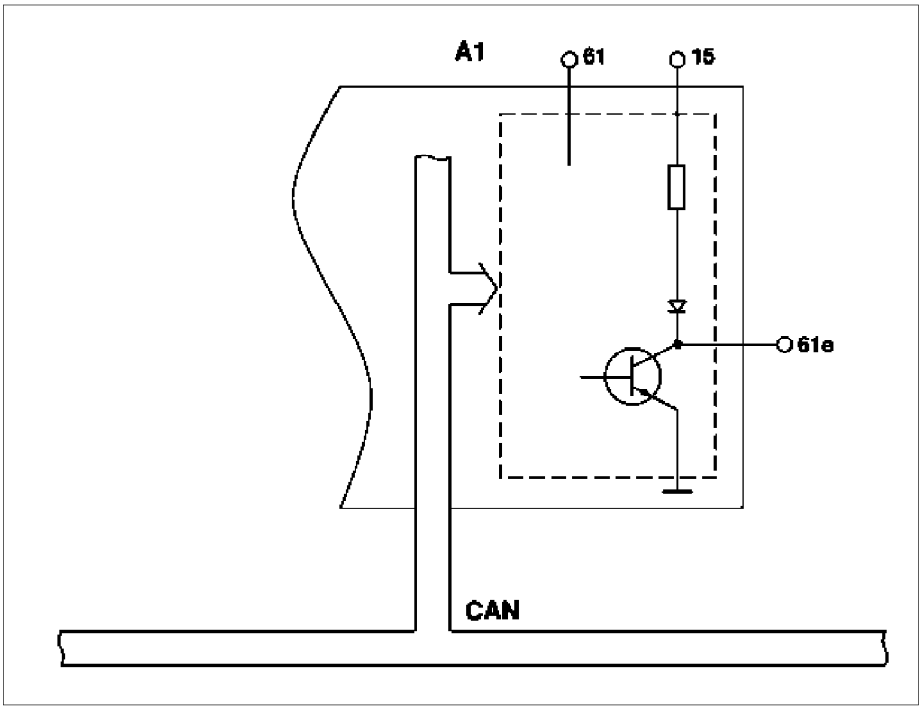
GF54.30-P-3007A	Charge indicator lamp, exterior lamp failure	24.10.96

MODEL 129, 140 as of 1.6.96,
163, 168, 170,
202 as of 1.8.96,
208 up to 31.7.99,
210 as of 1.6.96 up to 30.6.99

Terminal 61 is used for the generator indicator lamp. When the ignition is **On** the excitation voltage is applied to it and the generator voltage when the engine is running.
However, a terminal is required for some systems (e.g. exterior lamp indicator) which

- D is exactly at ground potential (low level), when the engine is not running with the ignition **On**
- D is exactly at least 10.5 V (high level), when the voltage at terminal 61 exceeds a particular voltage or the engine speed exceeds a particular threshold (480 rpm).

Terminal 61e is used for this (engine running recognition/speed threshold value).
Terminal 61e is produced in instrument cluster (A1) in accordance with the sketched circuit diagram:
An electronic system is ...via terminal 15



P54.30-0517-06

Terminal 61 and the speed signal are used as input signals which reach the instrument cluster via the CAN data bus.
If a particular speed or a particular voltage threshold at terminal 61 is exceeded, the transistor switches off and terminal 61e goes to high level (terminal 61 and the speed signal are interlinked to terminal 61e via an OR function. Also refer to table.)

The maximum current at terminal 61e is approx. 2 mA at high level and approx. 350 mA at low level. The switching delay is 0.5 seconds in each case.

Exterior lamp indicator lamp and charge indicator lamp

The input signal of terminal 61 and the speed signal are used for engine running recognition. Depending on these input signals the exterior lamp failure indicator lamp (A1e14) or the generator charge indicator lamp (A1e5) is actuated (refer to table).

Voltage term. 61	Engine speed	Term 61e	Warning/indicator lamp
U threshold	< 200 rpm	< 10.5 V	Bulb check
U threshold	> 480 rpm	U 10.5 V	Charge indicator lamp
U threshold	< 200 rpm	U 10.5 V	-
U threshol	> 480 rpm	U 10.5 V	-
-	Fault value	U 10.5 V	-

The instrument cluster also passes on the status of terminal 61e as a CAN message. The information is consequently available to all bus participants.
On models 163 and 168 terminal 61e is only made available as a CAN message. There is no discrete terminal 61e line.